

APR 22 1947

CLINICAL MEDICINE

ORIGINAL ARTICLES

	Page
Embolic Occlusion in Rheumatic Endocarditis . . .	115
The Treatment of Chronic Cholecystitis	119
Preventive Psychiatry	121
Clinicopathologic Conference II (Avoidable Death)	123
Immunity	125
The Family Physician IS Necessary	127
Pictorial Section:	
Intravenous Infusion in Infants	129
Recognizing Early Mental Disease	132
Editorials	134

COMPLETE TABLE OF CONTENTS ON
ADVERTISING PAGE FOUR



APRIL
1947

54

No. 4

* in equivalent doses
no barbiturate for oral
use combines more
rapid, profound and
shorter effect than . .

Nembutal®

(PENTOBARBITAL SODIUM, ABBOTT)

FOR SEDATIVE EFFECT:

NEMBUTAL IN ¼-GR. TO 1-GR. DOSES

* Nembutal is a powerful barbiturate—so powerful that doses of less than 1½ gr. suffice for many patients and in many conditions in which brief sedative and only a mild hypnotic action is desired.

* In simple insomnia, for instance, a dose no larger than one ¾-gr. capsule usually obviates emotional disturbances or reactions to outside stimuli sufficiently to induce sleep.

* Smaller dosage reduces the amount of the drug that must be eliminated, the duration of effect, and any slight possibility of "hang-over."

* Smaller dosage results in a monetary saving to the patient.

FOR TRUE HYPNOSIS:

NEMBUTAL 1½-GR. CAPSULES

* Only one 1½-gr. capsule is needed, under most circumstances, to produce 6 to 8 hours of sleep under the influence of the drug.

* For preoperative sedation and as a basal anesthetic, prescribe one or two 1½-gr. capsules the evening before and one or two capsules of the same size one or two hours before operation.

* For obstetrical analgesia and amnesia, administer one or three 1½-gr. capsules, with or without scopolamine, meperidine, when cervix is definitely dilated and recur regularly at not more than five-minute intervals.

A FORM TO FIT ANY SHORT-ACTING SEDATIVE AND HYPNOTIC NEED

NEMBUTAL ¾-GR. CAPSULES—For the majority of cases in which sedative effect only is desired.

NEMBUTAL 1½-GR. CAPSULES—For surgical, obstetrical and all requirements for true hypnotic action.

NEMBUTAL ELIXIR—Contains 2 grs. per fluidounce; ¼ gr. per teaspoonful. Unusually palatable.

NEMBUTAL SUPPOSITORIES—In ½-gr., 1-gr., 2-gr. and 3-gr. sizes.

NEMBUTAL AND ASPIRIN—Nembutal, ½ gr., and aspirin, 5 gr. Sedative and analgesic.

EPHEDRINE AND NEMBUTAL—Ephedrine, ¾ gr., and Nembutal, ¾ gr.

ABBOTT LABORATORIES • NORTH CHICAGO, ILLINOIS

Embolic Occlusion in Rheumatic Endocarditis

By MATTHEW H. EVOY, M.D., and GEZA DE TAKATS, M.D.*

ONE of the most striking examples of the human body's power of preservation is its response to acute arterial occlusion. Probably more than half of those suffering from embolic episodes recover the vitality and function of the ischemic parts, yet the responsibility of the physician for the proper evaluation of their status and management is great.

Among the patients whom we have attended in the past year for acute arterial occlusion, many were found to have a history and physical signs in keeping with rheumatic endocarditis. The individuals under consideration were seen on our surgical service at St. Luke's Hospital.

By acute arterial occlusion is meant the sudden onset of the symptoms and the signs of arterial stoppage. If a cerebral vessel is involved the classic description is that of abrupt appearance of aphasia, paralysis, and often a temporary coma. Rarely, when the embolus lodges in an artery supplying an abdominal viscus, the symptoms and signs can mimic almost any acute intra-abdominal disorder. The arteries of the extremities are frequently the site of the occlusion and when this occurs sudden severe pain is experienced in the region of the embolus and a cold, tingling, and sometimes paralyzed limb may result. This ischemic muscle pain is frequently absent in bedridden patients.

Among twenty-five patients with acute arterial occlusion eight (32%) were diagnosed as having rheumatic endocarditis. Table 1 shows the etiology of the others. Of the eight subjects four

were male and four female. The ages ranged from 19 to 58 years and the average was slightly over 40 years. In seven (87.5%) of the patients multiple embolic attacks had occurred.

The site of occlusion can be found in Table 2. The number of occlusions out-numbers the patients because of the recurrent emboli in some of the subjects.

Three embolectomies (37.5%) were performed, two of them on the same patient. This certainly represents a smaller incidence of surgical intervention than we would expect, and can be attributed partly to the fact that some of the patients were referred from distant parts and often the time interval contraindicated surgery upon their arrival in Chicago and partly to the favorable response to conservative management. In a previous publication by one of us (G. de T.) five of the ten cases were explored.¹

Two patients (25%) in this series required amputation. Both had been diagnosed as having had a saddle embolus at the bifurcation of the common femoral artery and in one of these an unsuccessful attempt at embolectomy had been made.

In an effort to determine the incidence of acute arterial occlusion in rheumatic endocarditis, another study has been undertaken. The records of one hundred patients with rheumatic endocarditis at St. Luke's Hospital, Chicago, have been studied. Eight of these gave the history or showed evidence of acute arterial occlusion.

In four instances, the occlusion resulted in no apparent lasting disability.

*From the Fourth Surgical Service, St. Luke's Hospital, Chicago.

In one of these, symptoms of left popliteal occlusion had occurred three times in a five-year period. The lower leg was colder than its mate but no sensory, motor, or other nutritional disturbance remained.

Another individual suffered a right brachial occlusion during her hospital stay. The disorder cleared promptly with no specific treatment. A third subject developed an acute cerebrovascular accident while in the hospital, and in twenty-four hours he was apparently normal. The last of this group was found to have pulseless and cold lower extremities, although there was nothing in his history to suggest an acute vascular occlusion, and there was no reported discomfort nor disability.

In another instance, an acute occlusion at the bifurcation of the aorta brought the patient to the hospital. This had occurred six hours before admission. After a few hours at bed rest there was evidence to show that the embolus had advanced into the left external iliac artery. Although she was a very poor operative risk the artery was explored and the surgeon encountered a massive thrombus that could not be completely removed. She expired in 48 hours, presumably from the effects of multiple embolic occlusions.

The sixth case was that of a patient who had required an amputation for a left popliteal arterial occlusion two years before. His present illness was that of occlusion of the right popliteal artery of six days duration. Treatment was conservative and there was no loss of tissue.

Another was brought to the hospital with the signs of right cerebral occlusion of 48 hours duration. She expired in less than a day with a massive cerebral vascular accident, probably of embolic origin.

The last in this series had expired in acute cardiac failure and autopsy showed thrombosis of the abdominal aorta and extending into the left com-

mon iliac artery. There was no recorded history of pain or disability in the lower extremities.

The ages of the 100 patients studied ranged from 7 to 62 years with an average of 32 years. The average age of the eight individuals suffering arterial occlusion was 44 years; the youngest was 24 and the oldest 54. In many patients the acute phase of the rheumatic infection passed unnoticed, so that the time interval between the onset of the disease and the first clinical embolic episode cannot be determined. It is fairly clear from our studies, however, that this interval averages several years.

Surgical Versus Conservative Therapy

The decision to operate or to use conservative means is possible only after several factors are considered. First, not over ten hours should have elapsed if a successful embolectomy is to be accomplished. After this time the propagation of the thrombus into both the proximal and distal trunks as well as into the tributaries makes surgical removal in toto quite impossible, and the rapid adherence of the thrombus to the intima provides an added difficulty.

Because the collateral arteries in the subject past middle life can not readily accommodate a sudden increased load, it is obvious that the damage caused by acute arterial occlusion increases proportionately with the age of the patient.

The outlook for restoration of the circulation with embolectomy would seem to vary directly with the caliber of the incised vessel. In this connection it must be remembered that the common femoral artery in a 60-year-old man usually has a considerably smaller lumen than that of a high school boy of equal body size, and for technical reasons the adolescent vessel lends itself more favorably to the successful removal of an embolus.

Significance of Anesthesia and Paralysis

In several instances, the neurologic examination of the limb has helped us

to decide the type of treatment. The loss of sensory and motor function in the limb usually signifies a severe circulatory deficit, and ultimate gangrene is very probable. In patients of this category, then, conservative treatment can offer little hope to preserve the limb.

Conservative Therapy

Our method of conservative management begins with:

1. The application of cotton or flannel wrapping to the extremity. This protects the parts from outside thermal influence, from heat loss and provides a cushion for pressure points.

2. In the great majority of our patients one or more paravertebral sympathetic blocks with procaine have been done. The only individuals who are not subjected to this treatment are those whose extremities exhibit severe vascular sclerosis where a sympathetic interruption would have little influence on the outcome, and also those in whom the time interval has obviated interference with the vasomotor mechanism.

3. To help further to overcome reflex vessel spasm, papaverine hydrochloride is given intravenously, preferably as grains $\frac{1}{2}$ every four to six hours.

4. The limb is not elevated but rather placed slightly in the dependent position. We feel that external heat is contraindicated, although a minimal amount of cooling to approach the desirable temperature for these limbs (75 to 85° F. is favored).

5. The use of anti-coagulants in these patients has been our policy for some time. Heparin in a dosage of 50 milligrams every four hours intravenously is started immediately, and roughly 300 milligrams of dicoumarol by mouth are administered at once. The quicker-acting heparin can usually be discontinued in from 24 to 36 hours, by which time the dicoumarol will have exerted its effect. Prothrombin time is determined daily and dicoumarol is given to maintain a clotting activity of between 30 to 50 per cent of normal.

Using this method we have observed no untoward effects from the anticoagulant drugs during the past year. The rationale of the anticoagulants is primarily an effort to prevent further emboli and also to inhibit the propagation of the thrombus from the point of occlusion. We have observed intravascular clotting even with a prothrombin level of 50 per cent of normal, but it has not been seen in this series.

Cerebral Emboli

Analogous to the lumbar sympathetic block in lower extremity occlusions, we have used stellate ganglion novocain injections in those with very early cerebral emboli.² Although two very dramatic results have occurred, it is too early to be able to give this treatment our wholehearted recommendation.

Case Report: On October 10, 1945 we were called to an out-lying hospital to see a middle-aged nurse because she had suffered a sudden severe painful attack in the right leg. We examined her five hours after the onset and found her in acute distress. The leg from the upper third of the thigh was cold and all motion of the leg and foot was lost. There was complete anesthesia of the toes and sensation became normal only at a high level in the thigh. She gave a history of rheumatic fever and the heart findings supported the diagnosis. Within an hour she was taken to surgery and an embolus removed from the common femoral artery (G. de T.).

Her convalescence was satisfactory until the twelfth day when she experienced a sudden attack of pain, tingling, and coldness in the other leg. We saw her shortly afterward and noted the absence of pulsation below the groin and a cold and somewhat mottled limb. There was no numbness or paralysis. Conservative therapy was chosen and her recovery was uneventful. Eight months later both legs were warm, although pulseless, and she was able to walk slowly for several blocks. There

was no pain at rest but claudication of both legs appeared with brisk walking for less than fifty yards.

On July 21, 1946, one month after this visit, we were asked to see her again because of a massive cerebral vascular accident. We found her in deep coma and she showed the signs of profound shock and a complete right hemiplegia. She expired in less than 24 hours. Autopsy showed no cerebral hemorrhage but evidence of cerebral artery thrombosis. The heart had changes in keeping with rheumatic endocarditis and a premortem-like blood clot was found in an auricular appendage. A massive bronchopneumonia was a contributing cause of death and the immediate cause was ascribed to a left internal carotid embolus.

Discussion

Emboli from a rheumatic heart originate in the auricle. The valvular stenosis favors stasis and eddy formation; the thickened valve is the nidus for the platelet deposit. Auricular fibrillation "per se" produces auricular stasis. Superimposed vegetative endocarditis may be a factor. Overzealous administration of digitalis increases the tendency of the blood to clot.³ Thus all the three factors known to facilitate thrombosis, namely stasis with stenosis, injury to the endothelium and increased clotting tendency may be present, when embolism to the periphery occurs.

The immediate prognosis for the great majority of these patients is hopeful. Those suffering cerebral vascular occlusions usually recover over a period of a few weeks and may not have discernible residual damage. When an extremity has survived the critical period, the ultimate dysfunction will of course vary directly with the original insult, and inversely with the ability of the individual to develop an adequate collateral circulation. In the very recent past we have attended two subjects who have suffered repeated attacks of embolic occlusion in the lower extremities. Both have cold

and pallid legs with no oscillometric evidence of a pulse below the femoral region. They are able to perform sedentary work but experience claudication with brisk walking for very short distances and are troubled even at rest with sensations of burning, tingling and numbness. They need assurance over and over again, as the ever-present threat of further embolic attacks creates an apprehension that often grows with each uneventful day.

Summary

Our experience during the past year with acute arterial occlusion in patients with rheumatic endocarditis is presented. Of twenty-five patients with acute arterial occlusions, eight had rheumatic heart disease. Three embolectomies and two amputations were performed. The rest of the patients were treated conservatively. Papaverine, anticoagulants and paravertebral sympathetic blocks are important whether or not surgery is to follow. The time factor often determines the viability of the limb.

Table I.
DIAGNOSIS IN 25 CASES OF ACUTE
ARTERIAL OCCLUSION

Rheumatic endocarditis	8
Coronary infarction	5
Trauma	3
Bacterial endocarditis	2
Spontaneous thrombosis	2
Thrombosis of popliteal aneurysm	2
Arteriosclerotic plaques	2
Sequel to extensive venous thrombosis	1
	25

Table II
SITE OF OCCLUSION

Femoral artery	8
Cerebral artery	4
Popliteal artery	2
Bifurcation of aorta	1
Brachial artery	1

Bibliography

- ¹de Takats, G.: Acute arterial occlusions of the extremities. *Am. J. Surg.* 33:60, 1936
- ²Mackay, W. A. and Scott, L.D.W.: Treatment of apoplexy by infiltration of the stellate ganglion with novocaine. *British M.J.* 2:1, July 2, 1938
- ³de Takats, G., Trump, R.A. and Gilbert N.C.: The effect of digitalis on the clotting mechanism. *J.A.M.A.* 125:840, July 22, 1944

The Treatment of Chronic Cholecystitis

By A. C. IVY, M.D., Chicago, Illinois

I DO NOT believe lecithin is of any more value for the treatment of chronic cholecystitis or biliary dyskinesia than egg yolks. So far as we know lecithin acts like egg yolks or fat producing cholecystokinin which in turn causes gallbladder evacuation.

Regarding hormones, I doubt whether any hormone will be of value in the management of gallbladder disease. I believe cholecystokinin will, when it becomes available, be very useful in the diagnosis of functional motor disturbances of the biliary tract (biliary dyskinesia).

I have found that most patients with "chronic cholecystitis, biliary dyskinesia, post-cholecystectomy syndrome" respond to the following management if the patient cooperates.

(1) *Tolerance of Dietary fat.* The tolerance of the patient to fat should be de-

termined by taking them off of all fat when they are having distress. When they become free of distress increase the amount of fat in the diet until they have distress. Then, place them on a fat intake lower than that which causes distress. This is what I call the "alimentary-biliary fat tolerance" of the patient. This concept settles all arguments regarding whether a "high" or "low" fat diet should be used. Some patients do best on 70 or 100 grams of fat a day, while others will tolerate only 20 grams. This is easily explained if we understand biliary tract physiology.

(2) *Heavy Magnesium Oxide Before Eating.* It is known that magnesium oxide, Magnesium sulphate, and other salines, for example Carlsbad water, when in the duodenum decrease the resistance to the flow of bile into the duodenum, or, as we say, relax the sphincter of Oddi. This in turn decreases the tension in the biliary passages, and per-

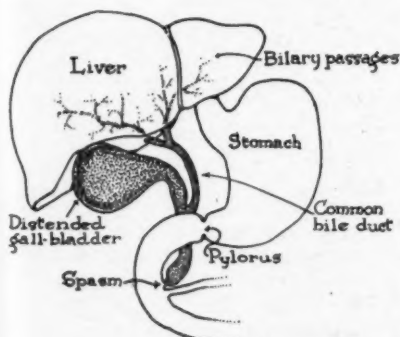


Fig. 1.

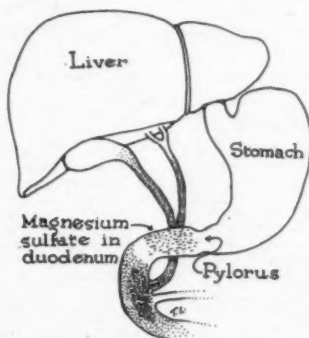


Fig. 2.

Fig. 1. The gall bladder is distended with bile due to spasm of the sphincter of Oddi.

Fig. 2. Magnesium sulfate, magnesium oxide or other salines introduced into the duodenum cause a relaxation of the sphincter and emptying of bile into the duodenum.

mits easy egress of the bile into the duodenum while bile is being formed by the liver or when bile is being forced from the contracting gall bladder. I recommend heavy magnesium oxide because it is easier to take than epsom salts. The amount to be taken must be guarded carefully. The dose given 3 or 4 times a day, ante cibum, should be just short of a laxative dose. (The antacid dose is 4 gr. (0.25 Gm.); the laxative dose 5 gr. (3 Gm.)—Ed.) If not properly used it will cause "cathartic colon" or increase the spasticity or dyskinesia of the so-called "irritable colon." And it should be added that a portion of these patients with biliary tract symptoms have a dyskinetic or "spastic" colon; and, that if the colon is properly managed by diet, the biliary symptoms will disappear.

This management and the omission of other raw foods, raw apples, radishes, etc., and sometimes quite acid fruit juices, and more complete mastication of meat and rough food will be entirely successful.

(3) *Belladonna*. However at times belladonna must be added, as drops or a pill, to give complete relief. The dose of belladonna at first must be that which dries the mouth and slightly blurs the vision. Frequently, after the belladonna has been taken for a week it can be discontinued. Sometimes it is necessary to give one or two hypodermic injections of one-sixtieth gr. (1 mgm.) of atropine sulfate. It appears that after "relaxation" has been produced with a large dose of atropine (also, dibutoline, Merck), that a smaller dose of atropine or belladonna is more effective.

This concept of a "priming dose" sometimes applies to the effect of magnesium oxide. For example, I have had patients who were not relieved by this management until after a Meltzer-Lyon type of duodenal drainage, or the introduction of 50 cc. of 33 per cent magnesium sulfate directly into the duodenum.

(4) *Bile Salts*. Bile salts, Ketochol, for example, are given four times a day to insure a good flow of thin bile.—

Removal of Non-Toxic Thyroid Nodules

When the operation is performed by surgeons who have had a considerable amount of experience in thyroid surgery and have perfected their technique, then the routine removal of non-toxic modules is a safe procedure. The two arguments used in favor of it are: 1. That the nodule may become active; and 2. that it may become malignant.

If the operation is done routinely in all instances the mortality may be a little higher than would be expected from carcinoma of the thyroid.

If the patient is followed periodically, thyrotoxicosis can be detected shortly after it occurs and the danger of malignancy

is no greater than the risk of operation when it is done in a routine manner. Malignancy of the thyroid is relatively rare and whether or not a nodular goiter is considered to show any evidence of malignant degeneration depends upon what the criteria for malignancy are. Many of the reports, indicating it to be relatively high, do not coincide with the actual observation that the incidence of carcinoma is low.

If nodules are large, extend into the substernal space and compress the trachea, they should be removed routinely.—W. O. THOMPSON, M. D., 700 North Michigan Ave., Chicago 11, Illinois.

Preventive Psychiatry

PREVENTION of mental ill health, an important function of psychiatry in World War II, was a major factor in keeping the Army's fighting force at maximum efficiency. Casualties of war are confined not only to those who have been physically wounded by shot and shell but also include those whose minds and emotions have been impaired, often far from the line of battle. The Army psychiatrist devotes his time and skill not only to curing serious mental illnesses but also to preventing poor mental health.

Never before in our history have psychiatrists and their auxiliary personnel been employed on such a vast scale in the Army as in this war. Neuropsychiatric teams were utilized in all levels of the Army both in this country and overseas and psychiatrists found themselves acting as consultants to command on matters of policy affecting mental health and morale of the troops.

Measures taken by Army psychiatrists in preventing mental ill health were founded on a basic principle that every individual has his breaking point. This point is reached by some after only a few days of minor irritations while others do not reach it even though exposed to weeks or months of the physical and mental strain of combat. Regardless of the stage at which this point occurs, psychoneurotic symptoms will develop when the limit of tolerance is reached. These symptoms do not appear suddenly. The breakdown is usually the result of a long chain of distressing events, any one of which could be tolerated alone but together impose stress with which the individual cannot cope and may involve factors concerning the soldier's entire background.

A man who can be reached before the breaking point can usually be brought back to normal by appropriate treatment with relief of the stress of circum-

stances causing his condition. It is the function of the psychiatrist to see that the factors causing stress are recognized, and, if possible, alleviated, thereby saving the potential, if not already actual psychiatric casualty.

The Army's first attack on the problem of prevention was in the induction station where during this war considerable success was attained in preventing entry into the Army of obviously neurotic individuals.

The next phase came in the basic training camp which was the first assignment of a man when he entered the Army. Mental Hygiene Clinics were established in each of these camps with the initial purpose of providing psychiatric help to the maladjusted trainee. Here the individual soldier was able to receive assistance from the psychiatrist in solving his personal adjustment problems which were more often the result of difficulties experienced in trying to fit himself into the group. Through group lectures an endeavor was made to give the soldier a healthy viewpoint toward coming into the service and to teach him proper adjustment to the special personal problems which Army life imposed. He was taught the nature of emotions such as resentment, anger, anxiety and fear, and instructed in their cause, physical effects and how to control them. As he passed to other assignments in the Army, the soldier found similar opportunities for assistance in maintaining his mental health.

One of the gravest responsibilities of the psychiatrist aside from treating mental illnesses was to provide instruction to the officers and men of his unit in its prevention. The direct relationship of good leadership to an efficient, effective fighting force placed specific emphasis on the necessity of educating line officers in the underlying principles of mental health and morals. Lectures cov-

ering the principles of personnel adjustment, personality structure, motivation, specific stress factors, signs and symptoms of breakdowns and measures to maintain mental health of the group were a part of the training of all officer personnel. Good leadership was often responsible for the success of neurotic personalities under trying circumstances while in many instances poor leadership was responsible for the non-effectiveness of many normal, healthy individuals.

The steps taken toward orienting men as to their role in the Army and the emphasis placed on the importance of identification of an individual with his unit, the insurance of the belief on his part that he belonged to the best unit in the outfit, and the conviction of the importance of his place within the unit and the job he had to do were all definite steps in preventive psychiatry.

Working closely with the command and the psychiatrist in maintaining the mental health of the troops was the Army Information and Education Service which assisted in attacking the problem of motivation by supplying troops with current news and information concerning the background and causes of war; the Chaplain who furnished spiritual aid to the individual soldier; and the recreation officer and the Red Cross who provided the troops with diversion.

The effectiveness of the program of preventive psychiatry is well illustrated by the Army's psychiatric casualties overseas. Approximately sixty per cent of combat-induced illnesses were returned to combat duty after brief treatment by the division psychiatrist near the front lines, while an additional thirty per cent were salvaged for non-combat duty in the theaters. This reflects the constant guard maintained against conditions and circumstances that would bring about stress beyond the limit of tolerance and the early recognition of symptoms leading to the emotional breaking point.

Brigadier General William C. Menninger, former Chief Psychiatrist of the Army and now a consultant, expresses the importance of this phase of psychiatry in his statement "One of the most important of our lessons from the war was the development of methods to prevent emotional breakdowns. In many ways this was a newer field than treatment of psychiatric casualties."

[The physician, who often sees his patients repeatedly over a period of years, must be on the alert for early signs of emotional breakdown and other mental illness (see Pictorial Section, page 137 in this issue of CLINICAL MEDICINE—Ed.)]

Treatment of Amebiasis

Emetine hydrochloride is the only drug known to eradicate amebic infection outside the intestinal tract. It is likewise useful in controlling acute amebic dysentery, but in a high percentage of cases, it is not curative, because the parasites become resistant to this drug and because of its toxicity. Emetine should be employed only in intestinal amebiasis to reduce severe symptoms.

Carbarsone (U.S.P.) is an effective, better tolerated arsenical.

Chiniofon is effective in acute and chronic amebic colitis. Its oral administration should be supplemented by high retention enemas of chiniofon solution.

Vioform (U.S.P.) has a high amebicidal rate.

Diodoquin (Searle) is effective but over a long prolonged period. This means weeks instead of from 5 to 7 days for a full course of treatment. It has no contraindications.—E. C. FAUST, Ph.D., in J.A.M.A., Dec. 21, 1946.

Clinicopathologic Conference II

Avoidable Death

THE physician's first duty is to prevent death. His first study is therefore of the conditions that cause death, how to recognize them and how to counteract them.

This clinicopathologic conference which consists of the salient points presented at a Massachusetts General Hos-

pital conference, illustrates a cause of avoidable death. This is not a criticism of the care given during the very short period that the infant lived, but to avoid the same error by other physicians.

To save reading time, the medical artist has sketched the important medical phases:

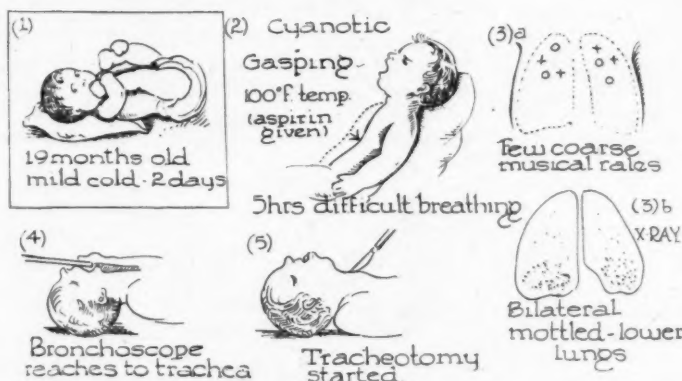


Fig. 1. A healthy infant of 19 months had been affected with a mild cold for 2 days, following which dyspnea appeared and became progressive.

Fig. 2. The infant was brought to the hospital after 5 hours of difficult breathing. Cyanosis was evident and the child was gasping for breath; there was retraction of the supra-sternal and epigastric areas with each breath. There was no hoarseness.

Fig. 3. *Examination:* Temperature of 100.0° F. (aspirin had been given); brilliant red throat; red, edematous epiglottis; few coarse and musical rales throughout both lungs. A chest x-ray showed bilateral mottled, increased density of the lower lungs. Fig. 3b. The white blood count was 25,000.

Fig. 4. A bronchoscope was inserted with great difficulty, as far as the trachea, visualizing reddened tracheal mucosa. A tracheotomy was performed, the child dying one minute before the tube was inserted. (Fig. 5).

Differential Diagnosis

Dr. Erna Anderson's remarks on differential diagnosis were the best type of clinical teaching. They are summarized:

Rapid Course { Interstitial pneumonia
Laryngotracheobronchitis

1. Interstitial Pneumonia

Age under one year; onset sudden; fever 98° to 103° F.; dyspnea increases rapidly; respiration fast, shallow; rales everywhere; cough hoarse, barking; WBC normal or slightly elevated.

2. *Laryngotracheobronchitis* (croup nocturnal, subglottic edema, epiglottitis)

- (a) Croup: cough hoarse, barking; respiratory distress *not* severe.
- (b) Laryngotracheobronchitis with subglottic edema: onset fast, fever 98° to 103° F.; age 1-2 years; hoarseness; WBC normal or slightly elevated.
- (c) Epiglottitis (onset sudden, 4-12 hours): tracheotomy needed; sore throat. dysphagia; hoarseness may be absent; fever 103° to 105° F.; WBC 15,000 to 40,000; prostration.

Haemophilus influenzae associated bacteremia.

Intubation contraindicated.

What do you think that the diagnosis is?

What would your treatment have been?

Necropsy Findings

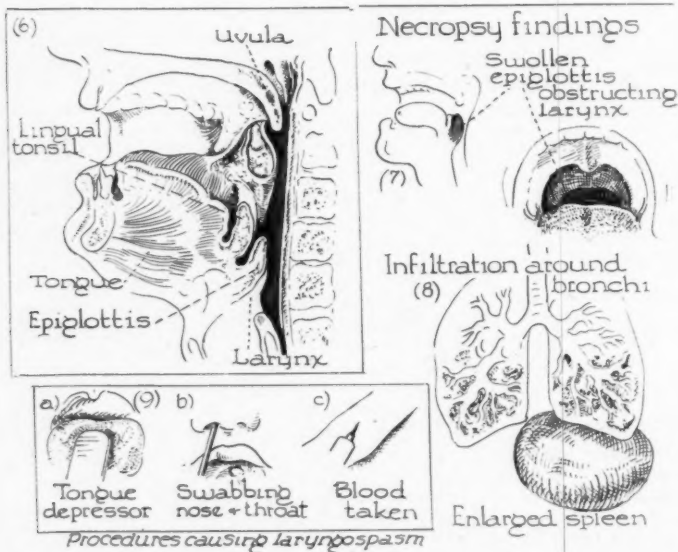


Fig. 6. Illustrates the relationship of the base of the tongue, the lingual tonsil and the epiglottis in the normal person. Adapted from Jackson and Jackson.

Fig. 7. "Interstitial pneumonia" with infiltration *around* the smaller bronchioles, not in the alveoli. The infiltration consisted of lymphocytes and monocytes. The spleen was enlarged and acutely inflamed, and Fig. 8. The epiglottis was large edematous, and fiery red, with a marked inflammatory reaction consisting primarily of polymorphonuclear cells; it was "practically an abscess," in the words of the pathologist.

Organism: *Haemophilus influenzae* type B was cultured from the epiglottis and the blood stream.

Fig. 9. Dr. Anderson suggested that before any minor procedure be undertaken on such severely dyspneic youngsters a tracheotomy set be at hand as laryngospasm is liable to occur. Such procedures as examination of the throat, swabbing of the nose and throat for bacteriologic material or taking a blood specimen may cause laryngospasm.

Anatomic Diagnoses: Epiglottitis; interstitial pneumonia.

Diagnostic Pointer

Think of epiglottitis when you see a large, swollen, cherry red epiglottis.

Immunity

By R. L. CORRELL, M.D.

Clarion, Iowa

IMMUNITY always seemed a simple thing. One injected living or dead organisms or virus, the body responded by pouring out antibodies which either agglutinated the invaders or aided the phagocytes (white blood cells) to devour them. Yet, the use of vaccines in prevention of disease did not seem to progress. A few fanatics used vaccines in the treatment or prophylaxis of everything from boils to brucellosis, and claimed marvellous results.

When the sulfonamides and penicillin came along, the development of active resistance to infection seemed much less important, although neither of these agents actually kill bacteria.

Rene Dubos, of Harvard Medical School, has written "The Bacterial Cell" (Harvard University Press) which discusses the biology and chemistry of such cells.

The general practitioner should be especially interested in the section devoted to immunization to infections. These are notable quotations:

"Immunity is a state of resistance to the effect of a given injurious agent or procedure. In the case of infectious agents, immunity can be brought about by stimulating the production in the host of certain antibodies capable of reacting with the pathogen. Antibodies can also be a response not only to bacteria but as a specific response to a great variety of injected substances (essentially harmless) . . . Antibodies are produced independent of the type of injected material . . . The eventual outcome may be beneficial to the host, as in the case of resistance to infection, or unfavorable as in the development of an allergic state."

Immunization can be attained by injection of weakened (attenuated) living

cultures, such as the use of cowpox for the protection against smallpox, and the filterable virus of yellow fever for immunization. "In brucellosis and plague, such a method has given favorable results on a practical scale."

Suspensions of killed bacteria also result in antibody formation, as do extracts or products of bacteria. *The development of antibodies is not proof that immunity to an infectious agent has been attained.* Certain antibodies are harmful, and cause severe reactions when similar products are injected later.

"The majority of antibodies induced by the injection of living or dead bacteria are completely devoid of protective power against infection . . . Bacteria contain a great variety of components other than the antigens concerned in protective immunization which give rise to a wide production of antibodies . . . The body has only a limited ability to produce antibodies so that the vaccine should be purified of all these useless antigens", not only to prevent overloading of the body but to prevent the development of violent reactions to them.

Resistance to similar strains has been studied. For example, in undulant fever, it has been found that, "human beings who have developed immunity as a result of a clinical or subclinical infection with one of the three strains of brucella can freely work with the others without being infected."

"Fresh blood serum or plasma is capable of killing appreciable numbers of different bacterial cells . . . This non-specific bactericidal power varies rapidly, within a few minutes or hours, after injection of unspecific substances, and decreases within a few days. There

occurs also a marked rise in bactericidal power of blood for certain bacteria, especially streptococci, during the fever of a variety of diseases."

The injection of an antitoxin does not necessarily cure the patient, unless the antibacterial mechanisms of the body are strong enough to control the invasive power of the harmful agent itself.

"Phagocytosis is an important mechanism of defense against infection. In the case of certain organisms, like the pneumococci, it probably results in rapid death of the phagocytized cells . . . Many micro-organisms, like the gonococcus and the meningococcus, however, can adapt themselves to life inside the white cell." The development of immunity may then permit these intracellular bacteria to be destroyed.

Conclusions

1. The injection of a vaccine or modified virus (smallpox, yellow fever) results in antibody formation. These antibodies may aid in protecting against disease and also give rise to severe reactions.

2. In undulant fever (Brucellosis), the development of immunity to one strain of the organism, as to the cow or goat type, apparently protects against all three strains. Immunization against brucellosis has proved practical.

3. The injection of nonspecific substances increases the bactericidal power of the blood within a few hours; such power lasts for several days. Perhaps the older physicians who injected boiled milk, turpentine or typhoid vaccine in the treatment of a wide variety of infections were on the right track.

4. Fever causes a marked rise in bacterial power of the blood for certain diseases. This, too, is in line with the older belief that fever was a protective mechanism. Do not destroy it with aspirin.

5. The use of antitoxin alone may counteract the toxin produced by the bacteria, but does not control the invasion of the bacteria themselves. It would seem more logical to give anti-

toxin plus a bactericidal or bacteriostatic agent, such as penicillin or a sulfonamide.

DISCUSSION

By ERNEST WITEBSKY, M.D.

University of Buffalo Medical School,
Buffalo, New York.

I have not heard about procedures in which attenuated but living cultures were used in the immunization against brucellosis and plague, especially in recent years. To my knowledge only killed bacterial suspensions are used in those instances.

The so-called strains in brucellosis of course are very similar from the antigenic standpoint and possibly varieties from the same original type of organism. It is not surprising therefore that infection with one variety protects against another variety (there is a strong reaction between the three types).

The statement that "the majority of antibodies, induced by the injection of living or dead bacteria, are completely devoid of protective power against infection" seems to be exaggerated. I would say something like "antibodies induced by injection of living or dead bacteria do not necessarily protect against infection."

The statement that antitoxin does not kill the organisms themselves is correct. However, the bacteria themselves are mainly saprophytes and for that reason immunization against toxin alone completely protects against such diseases as tetanus and diphtheria. However, in actual disease it might be wise to give antitoxin as well as chemotherapy as mentioned.

The recommendation of non-specific therapy is justified as a whole. However, the objection against non-specific treatment is two-fold; 1. It is difficult to determine the correct dosage because of the differences in response by various human beings, and 2. You might also activate the pathological process itself, as for instance in tuberculosis where you can readily reactivate tuberculous foci by non-specific treatment.

The Family Physician IS Necessary

By JOHN L. SWITZER, M.D., *Chicago, Illinois*

THE relationship of the doctor to the patient often predetermines the successful prosecution of therapy. All too often the physician carefully examines the patient, has laboratory examinations made, and prescribes therapeutic measures without actually having known the patient. The expression, "treat the patient and not the disease," has become evident in recent literature, but even today, particularly as an aftermath of the conditions of practice produced by the stress of the war years, some physicians remain mechanistic and disregard the emotional phase of illness.

We are in an era of specialization in which many physicians limit their practice to one particular phase of medicine. It is difficult for most patients to analyze their symptoms and to select a physician best qualified to diagnose and treat their particular ailments. It is in this realm that the general practitioner can accomplish his greatest good. It has also been evident that many patients are awed by the aura of dignity and aloofness that emerges from the word "specialist" and are reluctant to discuss their little troubles, which from a psychiatric point of view may be the greatest contributors to the etiology of their present distress.

History Taking

History taking, a fact-finding process, should be done in a clear concise manner. It is important to let the patient talk freely while the doctor directs the channels of speech by strategically interjecting questions and comments. Pointed direct questions are in most instances misleading. Some patients, in an attempt to ingratiate themselves, will

readily admit or deny various factors, if they feel that by so doing they will give the response the physician desires.

Much emotion is usually centered about a patient's illness or fancied illness, and the emotions are readily displayed by some people through changes in facial expressions, posture, and mannerisms. The doctor thus has a wealth of opportunity to obtain pertinent information by careful observation of these things. It is for these reasons, that the task of history taking should not be relegated to the secretary or nurse. In addition, many patients more readily show their confidence to the physician and express their fears, guilt, anxiety, and worry to him more readily than to an assistant.

Sympathetic understanding, real concern over another's illness, and misfortunes cannot be put on like a white coat and discarded at will. One must have a genuine feeling and healthy interest in his patients and his profession.

It is true that the specialist may, and usually does have all of these attributes, but it is more difficult for him to develop as apt a personal relationship with the patient as the general physician, the family doctor. This is of necessity, as the latter intimately knows the patient, his family background and reactions. Frequently patients have stated, "I wish I had a personal family physician, one who knew me and my family inside out."

The genesis of neurotic ills does not occur over night, and one can more readily understand the patient's complaints if one has had first-hand insight into the exciting factors. Many times the patient will color his story

to aid his ego, and to reassure himself. Knowing the surrounding facts as he does, the family physician finds the synthesis of the pertinent factors less difficult, and this leads to a happier and faster cure.

It is not the purpose of this paper to decry the specialists in favor of the general man. Rather this paper desires to call attention to the fact that the specialties are limited and to crystallize the thoughts about general medicine and its assets. It is unfortunate that the trend today, among recent medical graduates, is towards the specialties. It seems that too many young doctors feel that to be a general practitioner is derogatory, that it is a waste of their talents to enter general medicine, and that being a general practitioner precludes further advancement professionally. Some of this feeling is inculcated by the medical schools, since most of the instructors are specialists in their fields. This is of course necessary for adequate instruction, but unfortunately some students do not associate these facts with teaching proficiency and the actual practice of medicine. It would be interesting and enlightening to provide junior and senior medical students with a course in general medicine, a course which would present the attributes and drawbacks of general practice.

Psychiatry is a specialty, and major psychiatry should not be used by untrained men. Minor psychiatry, like minor surgery, is a potent therapeutic aid available to the general practitioner. Many times the general physician has utilized the psychiatric approach daily. However, a great number of men, reluctant to accept the psychiatric method because of misconceptions and a lack of training, look askance at psychiatry. Many prefer the "common sense" and the "you'll grow out of it," or "it's your nerves" approach.

A large percentage of general prac-

tice is comprised of neurotic individuals, patients who are incapacitated to a greater or less extent by their fancied ills, but who are as great a loss to themselves and the community as an individual with organic disease. The general practitioner usually has first contact with these persons and is in a position to do them the most good. It is desirable therefore that the general practitioner be psychiatrically oriented so that these patients may gain early treatment and aid, or be referred to a doctor who is competent to give the necessary therapy. It is important that the general physician know and recognize his limitations and that he request aid and consultation in matters he considers beyond his capacity professionally. This is an important point, for prolonged inadequate therapy in many respects is as detrimental, or more so, than no treatment at all. It is also important to realize that patients rarely come to the doctor for diagnosis but for treatment and help. It is of little value for an individual to know that he has a cardiac neurosis when nothing is done to relieve his heart consciousness.

The general practitioner has a definite place in the social community and a prominent position professionally. Indeed the general physician must of necessity diagnose and treat in many cases without the elaborate laboratories and technic of the specialist. This in itself indicates a high degree of medical proficiency. The general physician is highly regarded by the laity as an esteemed member of the community.

The general physician who keeps in touch with the current literature, who takes regular post-graduate training, who practices good sound medicine and who gains the confidence and trust of his patients can be in a position to be envied by the most well-known specialists.

2501 W. Devon Avenue.

Intravenous Infusion in Infants

FOR infants who need intravenous infusions over a period of hours or days, a simple technic will permit the insertion of a cannula into a vein at the

ankle. J. H. Kirkham, M.B.F.R.C.S. (Ed.) of West Bromwich and District General Hospital, West Bromwich, England writes to Clinical Medicine concern-

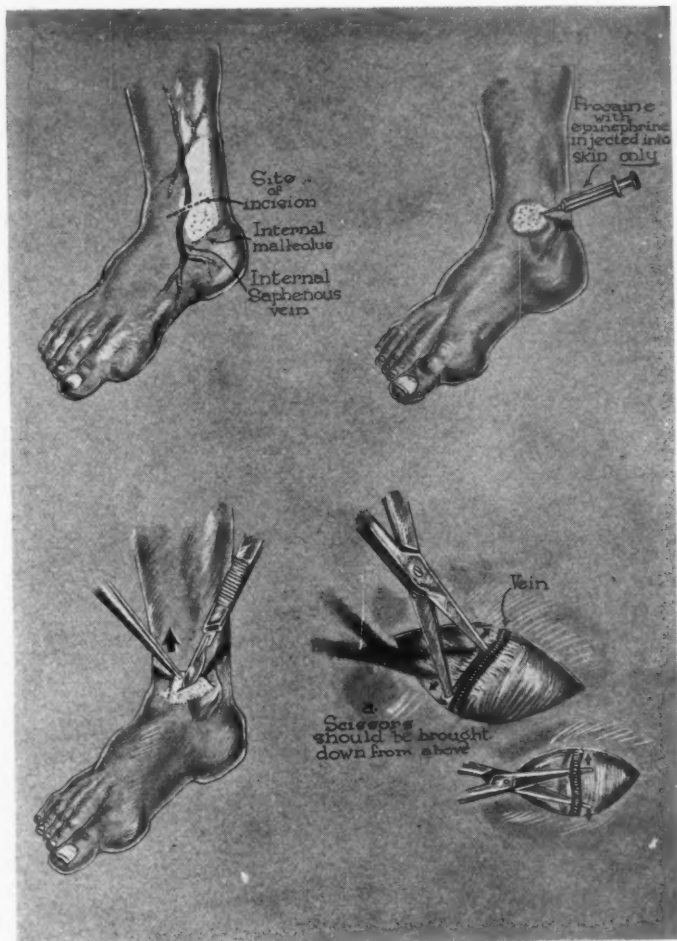


Fig. 1. Anatomy of area showing branch of internal saphenous vein just anterior to internal malleolus.

Fig. 2. Procaine and epinephrine solution injected into the skin *only* over the vein.

Fig. 3. The skin is picked up with a toothed forceps and incised (so as to avoid cutting the vein).

Fig. 4. The scissors are brought down from above, (a) the vein separated by blunt dissection from parallel structures, then (b) freed from structures below.

PICTORIAL SECTION

ing his technic: "I can assure you that there is no danger of shredding the veins if reasonable gentleness of technic is used. I have recently used the method described in infants only a few months old, but in these cases I would

stress the importance of not cutting the vein for more than half its diameter, as otherwise it is liable to break in two.

The needle we use has a slight bulge near its tip and also a definite enlargement further from the tip; in an adult I

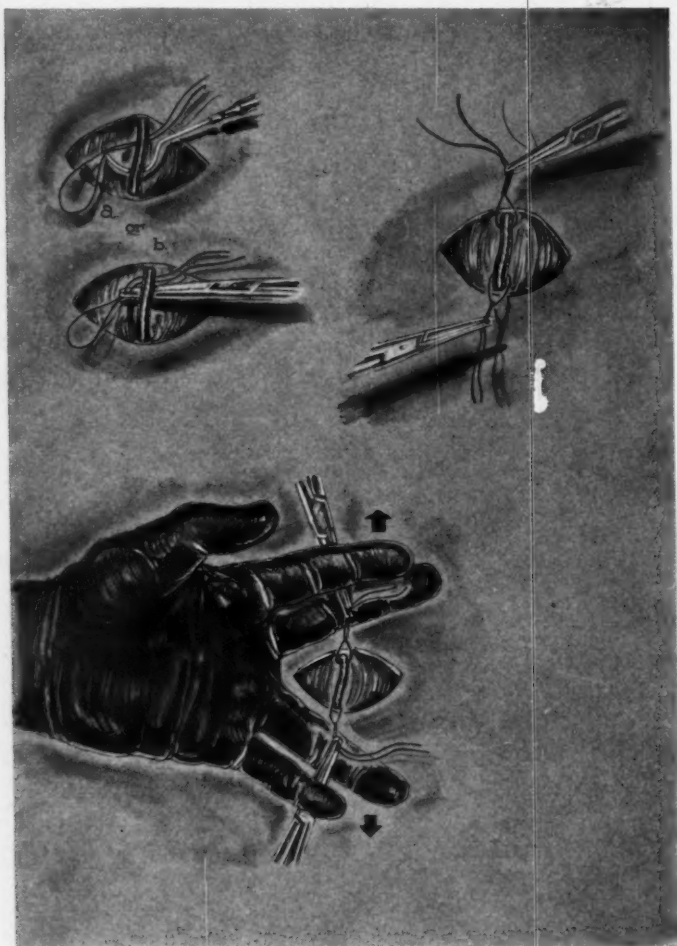


Fig. 5. An aneurysm needle or artery forceps is used to place a loop of catgut underneath the vein.

Fig. 6. The loop is cut, thus making two individual ties under the vein and one placed on the top, the other at the bottom of the incision.

Fig. 7. To manipulate the vein with the left hand, the hemostats clamping the catgut loops are grasped in the fingers of the left hand.

PICTORIAL SECTION

endeavor to insert this enlargement into the vein and tie the latter between here and the tubing. In a child, however, it is inadvisable to insert the bulge right into the vein as the latter will tear, being small and more friable.

In actual practice, however, especially with a restless patient, the tying of the vein round the tubing side of the bulge on the needle, is not in itself sufficient to prevent it being pulled out. Originally I used the long ends of the catgut

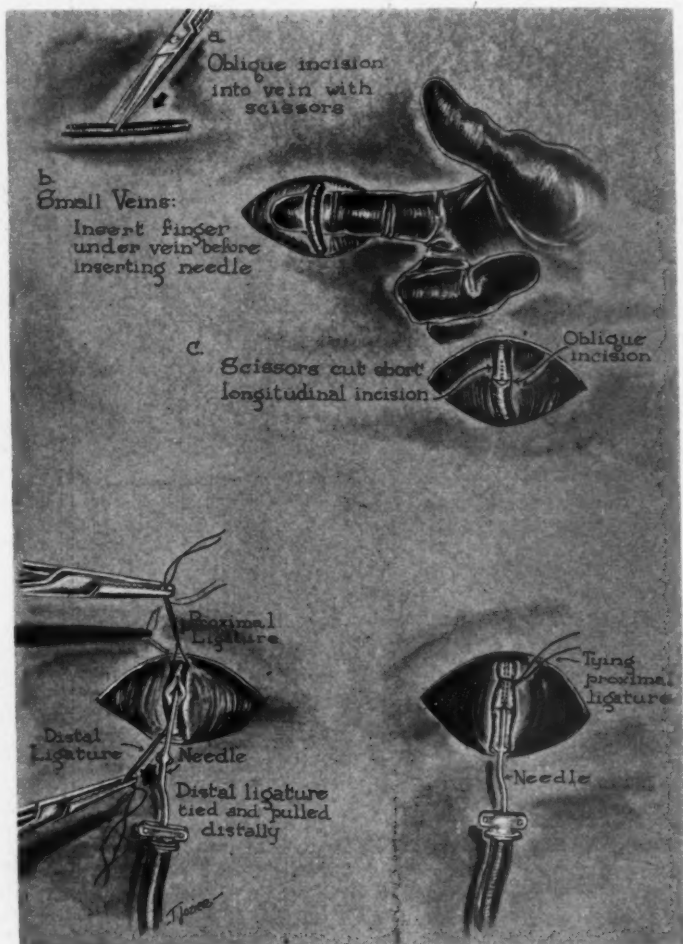


Fig. 8. a. An oblique incision is made into the vein with small, sharp scissors. b. If the vein is quite small, a finger may be inserted under it before inserting the needle. c. If the vein is too small to receive the needle, a longitudinal incision in the vein may also be made.

Fig. 9. The distal ligature is tied, then pulled distally, the proximal loop tightened and the needle inserted.

Fig. 10. The proximal ligature is tied under the needle, after the bulge has entered the vein. If a winged needle is used, as illustrated, it may be sutured in place.

ligatures tied around the vein to thread through the skin and through the wings of the needle, but even with this it was found that occasionally a needle would pull out. By using separate silkworm sutures through skin and wings only, the needle cannot possibly pull out—the rubber tubing will pull off the needle first.

I would add that if glucose and saline is given continuously the vein is invariably thrombosed on the 3rd or 4th day, owing to the glucose, but this difficulty is not met with saline alone.

Since writing this article it has, as

you undoubtedly know, become known that penicillin is inactivated by various synthetic rubber tubings and therefore this becomes important when one is contemplating giving penicillin by intravenous or intramuscular drips.

The depth of the vein is not usually appreciated by beginners and most men trying the procedure for the first time are unsuccessful due to the fact that they attempt to insert the needle into a superficial small vein. The vein is on the periosteum and is of appreciable size (approximately $\frac{1}{8}$ " diameter) in an adult.

Recognizing Early Mental Disease

The physician or surgeon is often consulted by patients who are suffering from mental illness. It may be so slight as to be detectable only by the relatives, who notice that the patient's actions are different than formerly or may be so marked that one is instantly aware of abnormal mental reactions.

Alvarez has called attention to the fact that physicians overlook fairly obvious mental disease because the patient com-

plains of symptoms apparently due to physical causes, and an adequate history is not taken, thus overlooking "nervous breakdowns" and other suggestive episodes.

Edwin F. Gildea, M.D., neuropsychiatrist of Washington University School of Medicine, St. Louis feels that there are several symptoms which should be kept in mind by the physician. *Clinical Medicine's* staff artist, T. Lozier, has illustrated them in cartoon form.



Fig. 1. Loss of memory for recent events is a reliable sign of organic brain disease.



Fig. 3. The most important clue to early mental illness is a change in the patient's behavior with his family or at work.

PICTORIAL SECTION



Fig. 2. Can the patient tell a clear story of his illness? Failure to do this is often an early sign of mental disease.



Fig. 4. There is a change in behavior as compared to his previous actions.



Fig. 5. The youth who attends high school only one or two years may have an early mental disease.



Fig. 6. Is the patient overtalkative, overcheerful and overly elated?



Fig. 7. Is he dejected, sad, lacking in energy and uncommunicative?

EDITORIALS

The Physician as a Citizen

"The most difficult and momentous question of government is how to transmit the force of public opinion into public action" (Albert Bushnell Hart in A. Lawrence Lowell's "Public Opinion and Popular Government").

The physician, as a rule, is little interested in his city, state or country. He enjoys the benefits of his democratic society without making the effort to continue that way of living, until the threat of socialized medicine comes along.

The physician need not run for mayor or governor or representative or senator to help, although the few physicians, among the many lawyers who make up such representative assemblies, are often able to guide legislation in more

sensible and needed directions. It would benefit the profession and the public if the few physicians who are versed in public relations, who have studied the medical needs of the country and the various plans proposed for their solution, who have given freely of their time and energy to medical societies work, were to be paid full time to continue and enlarge on such activities.

The average physician can interest himself in some community activity, be it Boy Scouts, a recreation building for high school youngsters, the construction of a new hospital or improvements in an old one, the sanitation of the city jail, public health problems of all types. Many of these activities border on or are in his own field.

The Significance of Thyroid Nodules

"The average general practitioner and often the internist regards nodules in the thyroid gland with complacency. The instance of malignancy developing in such nodules has increased tremendously in our department in the last decade and is now between 10 and 15 percent in private practice."

"No one can be more certain a nodule in the thyroid gland is benign or malignant from mere palpation than one can in an early breast tumor. All nodules in the thyroid gland should be considered potentially malignant until proved otherwise." (Letter to the editors of *Clinical Medicine* by Dr. William F. Rienhoff, Jr., famous surgeon of Baltimore, Maryland).

I do not think that the general practitioner is complacent about such nod-

ules. He knows that *any tumor contains abnormal tissue and should be removed*. He just has not been as well sold on the idea that such nodules contain dangerous potentialities.

Often he is not aware that such nodules cause *insidious* heart damage with later cardiac decompensation and auricular fibrillation. Such hyperthyroidism is often not accompanied by the dramatic symptoms of exophthalmic goiter and goes unrecognized for long periods.

He forgets that pressure symptoms may slowly develop. He forgets that when malignancy does develop in a nodule that has been present for years, the patient does not notice the irregularity and hardness, and does not ask for medical help until too late.

The patient is often the biggest stumbling block. He has been told,

"Don't bother that goiter until it bothers you," and, like all patients except the psychoneurotics, wants to avoid surgery which he is sure will be expensive, painful, or both.

Often, one has a feeling of futility in attempting to persuade these patients to undergo thyroidectomy (simple removal of the nodule is insufficient as other, smaller nodules may then enlarge), because of their insistence on

the fact that the lump has been present for years without harming them.

Such patients may be given the alternative of thyroidectomy or having the nodule examined every six months to detect early thyrotoxicosis, pressure symptoms locally, myocardial damage or malignant change.

A worthwhile psychologic point is to emphasize to the patient that it is a "tumor," rather than a simple nodule.

Lactic Acid Feeding Fatalities

The recent deaths (1) of three premature infants after receiving an acidified milk mixture containing an excess of lactic acid serves as a reminder that the dietary pH must be kept within limits if human body tissues are not to be injured by the foods we eat and drink.

Bridges and Mattice (2) have pointed out that in physiology the distinction between the terms "acid" and "alkaline" depends upon the biochemical processes under investigation. Gastric digestion of proteins, for example, proceeds optimally at pH about 1.8; therefore when the pH is above 3 the condition may be described as an acidity. Conversely, blood plasma at a pH of 7.2 is decidedly acidotic. In the field of taste, foods above pH 5 and at times as low as pH 4 seem "neutral" to the tongue. In fact, a taste disagreeably acid to all palates is not reached until pH 2.

Very few foods are chemically alkaline, and these rarely rise higher than pH 7. The common ones (2) are graham crackers and cold storage eggs, also soda crackers, clams, s⁷ 'nach and frozen corn, on occasion. Bridges and Mattice found the most acid foods to be the fruit juices (ranging between pH 2.3 (lemon) to 4.1 (tomato) pickled cucumbers (pH 2.7), and coca-cola (pH 2.3 to 2.6). Milk, cereals, meats, vegetables and most of the common foods, as prepared for serving, were between pH 5 and 7.

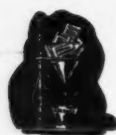
Acid Drinks Injure Teeth

Both McClure (3) and McCoy, *et al* (4), have recently called attention to the potential danger of acid drinks to tooth enamel. McClure showed that when rats were given acid drinks (ginger ale, cola drink, grapefruit juice, cranberry juice) in place of water for any length of time, marked etching and corrosion of the teeth regularly followed. McCoy described experiments in which extracted human teeth were placed in acidified beverages; a marked softening of the enamel became demonstrable within 2 days.

Thus, even though the stomach of the child and adult can withstand strengths of food acidity which may be injurious to that of the premature infant, the effects upon the teeth of acidified soft drinks and fruit juices are needful of contemplation and further study.—Irving J. Wolman.

References

1. Young, E. G. and Smith, P., Lactic Acid: A Corrosive Poison, *J.A.M.A.*, 125, 1179 (August 26) 1944.
2. Bridges, M. A. and Mattice, M.A.: Over Two Thousand Estimations of the pH of Representative Foods. *Amer. J. Digest. Diseases*, 6, 440, 1939.
3. McClure, F. J.: The Destructive Action, In Vivo, of Dilute Acids and Acid Drinks and Beverages on the Rats' Molar Teeth, *J. Nutrition*, 26, 251, 1943.
4. McCoy, C. M., *et al*: Nutritive Value of Food Served in Some Large Naval Messes. *J. Amer. Dietet. Assn.*, 21, 68 (February) 1945.



CLINICAL NOTES AND ABSTRACTS

Laryngeal Stridor in Children

Laryngeal stridor, the noisy difficult respiration of patients in whom there is an obstruction to the free passage of air through the larynx, most commonly occurs in children as a result of (1) inflammatory, (2) congenital, or (3) neoplastic lesions.

Accurate diagnosis is essential and should be based upon direct examination of the larynx with a laryngoscope. Direct laryngoscopy not only permits inspection of the larynx, but also removal of secretions for bacteriological examination. Careful cultures of the throat and larynx are particularly important in anticipating chemotherapy. Direct laryngoscopy also assists in the exclusion of extralaryngeal disease as, for example, enlarged thymus.

Laryngobronchitis

The most common of the inflammatory diseases producing laryngeal stridor is acute laryngotracheobronchitis. It is an acute specific infection of the mucosa of the structures named, usually secondary to an infection of the nose and throat. Streptococci, usually hemolytic, and staphylococci are the causative organisms, although some investigators believe that the influenza virus is often the cause. The disease is not common, but is frequently mistaken for severe influenza, bronchopneumonia or streptococcal sore throat. It is particularly dangerous in children under 2 years because of their lack of natural immunity and the small calibre of their laryngeal passage. Severe cases may be fulminating and rapidly fatal.

Laryngeal obstruction follows shortly after a mild coryza and there is frequently marked fever, chills, toxemia, convulsions and vomiting. Hoarseness is

the first danger sign of laryngeal involvement, but is followed shortly by development of croupy cough and noisy, stridorous breathing, especially on inspiration. In advanced cases, cyanosis progresses to an ashen-gray color to the skin and there is respiratory embarrassment manifested by retraction of the soft tissues of the infra- and suprasternal areas during inspiration. These signs demand relief before the patient is overcome by exhaustion and toxemia. The diagnosis is confirmed by direct laryngoscopy and aspiration of secretions for culture. Pneumonia may be ruled out by X-ray of the chest. Bronchoscopy will rule out foreign body if such be suspected. The larynx and trachea appear red, swollen and dry, especially in the subglottic areas. The exudate is scant and dry with a tendency to form adherent crusts which may become dislodged to produce further obstruction. Asphyxia from laryngeal edema and crusts, exhaustion and toxemia are the chief complications although septicemia occasionally occurs.

Maintenance of an open airway is the prime consideration and tracheotomy must always be kept in mind. This procedure is less commonly necessary in modern medicine when chemotherapy, oxygen-carbon dioxide (O_2-CO_2) administration through a humidifier, and careful nursing are more readily available. The judicious use of small doses of mild sedatives is a valuable adjunct. Tracheotomy, sometimes a life-saving measure, adds certain hazards including the dislodgement of crusts. The formation of these crusts is minimized by the proper humidification of the inspired air or O_2-CO_2 mixture.

Congenital Stridor

The most common congenital cause for laryngeal stridor, appearing at birth or shortly thereafter, is persistence or accentuation of the infantile type of larynx (laryngomalacia or laryngeal inspiratory collapse). The stridor is produced by the indrawing of the upper orifice of the larynx with a drawing downward and curling inward of the soft, flaccid epiglottis. The soft tissues are drawn into the glottis contributing to the obstruction. Hypertrophic ventricular bands may develop in the larynx in an attempt to compensate for the underdevelopment and flaccidity of the epiglottis. Stridorous breathing, accentuated during inspiration, is the chief symptom. The sound has been described as a flutter, or a crowing and is vibratory or flopping. Expiration is usually free. There are periods of hours of freedom from stridor especially during sleep and it is most pronounced during such exertions as eating or crying. Severe laryngeal obstruction is uncommon, but attacks of choking and cyanosis may recur at irregular intervals. The diagnosis is suggested by the characteristic appearance of the larynx during inspiration under direct laryngoscopy and is confirmed by the disappearance of stridor when the entrance to the larynx is cleared by the laryngoscope.

The condition usually disappears spontaneously after the second year and the majority of patients need little treatment. Nutrition must be carefully maintained by careful feeding and well chosen dietary. Severe attacks, if infrequent, may be corrected by elevating the glottis with the finger or an instrument. Close observation is necessary as severe attacks may be fatal unless a tracheotomy is done. In cases with frequent choking attacks, the patient may have to wear a tracheotomy tube until the condition is outgrown.

Tumors in Children

Many types of tumors cause laryngeal stridor in children, but by far the most common are multiple papillomata of the larynx. These growths tend to lag in growth as puberty approaches suggesting an endocrine factor in their occurrence. Symptoms: Hoarseness, cough, stridor, dyspnea, cyanosis, attacks of

choking, anorexia and loss of weight, varying according to the amount of growth. Although the dyspnea is commonly inspiratory, it may be expiratory. There is a recession of general health and erroneous diagnosis of bronchial asthma, heart disease or nephritis may be entertained. The hoarseness varies in severity while the cough tends to be persistent, dry and non-productive. Direct laryngoscopy reveals single or multiple pinkish-white cauliflower masses firmly attached to the vocal cords or to the interior of the larynx. These tumors rarely if ever become malignant.

Papillomata are removed with biting forceps through a laryngoscope. They tend to recur and this tendency is increased by inadequate removal. Trauma to the tissues during the procedure may result in scarring and damage leading to permanent changes in voice, especially after puberty. Preliminary tracheotomy may be necessary if asphyxia occurs during the operation or where there is rapid growth of the tumor. Biopsy of the growth is indicated as malignant changes have been reported.—D. S. DeSro, *Penn. Med. J.*, Aug. 1946.

The Drug Treatment of Allergic Diseases

Histaminase does not consistently help allergic patients, nor is there a proven experimental background.

The sympathomimetic drugs such as ephedrine, adrenalin, propadrine and similar drugs owe their anti-allergic action primarily to the vasoconstriction they produce. They have no appreciable action on the mechanisms involved in the allergic reaction. This limits their action. They do not interfere with the concomitant use of anti-histaminic agents.

Benadryl is quite effective in urticaria and angioneurotic edema. Serum sickness has also been benefitted. *Benadryl* is also effective in allergic dermatitis and in relieving the itching of puritis vulvae. Hay fever is benefitted in three-fourths of the cases; asthma in only a small proportion.

Pyribenzamine is very effective in urticaria and angioneurotic edema; also

in allergic dermatitis, hay fever and, to a lesser extent, in asthma. Pyribenzamine gave relief to two-thirds of patients with vasomotor rhinitis.

Dosage: Benadryl is administered orally in 50 mg. capsules. In acute conditions, individual doses of 50 milligrams may be taken, while for persistent symptoms, doses of 50 milligrams four times a day may be used. For infants, 10 to 20 milligram doses have been employed, and in children up to ten years of age, 25 milligram doses are used. Larger doses result in drowsiness and sleepiness.

Pyribenzamine is administered orally in 50 milligram doses three or four times a day. 100 milligram doses may be given with relief which was not obtained on the smaller dose.

The use of these histamine antagonists should be carried out with the understanding that a cure or lasting improvement is not to be anticipated because these drugs exert a temporary palliative action in allergic conditions. In many patients, many manifestations will fail to respond to them, and others will be helped by the employment of additional palliative measures. The specific allergic methods, elimination and desensitization, should not be abandoned, as they constitute the sole means of achieving lasting results.—SAMUEL M. FEINBERG, M.D. (Chicago, Ill.) *J.A.M.A.* Nov. 23, 1946.

Should Local Antiseptics Be Used in the Eye?

Lt. Col. John G. Bellows, M.C., U.S.A., performed a series of clear cut experiments which indicate that the commonly employed antiseptics are not only ineffective but may be harmful to corneal healing.*

The entire cornea of young rabbits was rubbed with dry gauze until it was entirely denuded of epithelium, thus inflicting a complete corneal ulcer. Eyes which received no treatment appeared clinically normal in 4 to 6 days; eyes treated with common local antiseptics still showed large denuded areas at the end of 6 to 12 days.

*Bellows, Lt. Col. John M., M.C. Influence of Local Antiseptics on Regeneration of Corneal Epithelium of Rabbits. *Arch. Ophthalmology*, 70-81, July 1946.

Mild silver protein, 10 percent; zinc sulfate in 0.5 percent solution; Zephiran chloride 1:3,000 aqueous solution; methaphen, 1:2,500 aqueous solution; merthiolate; mercuric oxycyanide 1:5000; sulfonamide compounds except for 2 percent solution of sodium sulfathiazole—all were found to delay healing or to cause permanent corneal damage.

Penicillin, 1cc. containing 2,500 Oxford units, did not delay epithelial regrowth or cause scar formation.

(Fleming, the discoverer of penicillin, demonstrated some years ago that tears contained a natural antiseptic or antibiotic (lysozyme). If a solution must be used in the eye, why not employ physiologic saline solution or Gifford's eye solution?—Ed.)

Psychological and Emotional Factors in Children With Chronic Illness

IN managing the child affected by chronic illness, remember that you are dealing with psychologic frustration.

The child is put to bed and kept still. He is frustrated because his emotional life is blocked. The child has simple methods of expressing feeling, and usually does so at the motor level.

The happy or angry child jumps up and down, something that can't be done in bed. The child must learn to vent feelings in other ways.

The balked child may: 1. Pout or sulk. 2. Explode violently with temper tantrums. 3. Day dream; enjoy fantasies.

There is, usually, little educational progress while in bed. Poor mental hygiene causes difficulty either in home or hospital.

Normal sibling rivalry is interfered with. The normal child learns his own strength, to hold his own rights, to learn what he is, to keep up his feeling of self esteem, and importance. The child loses when he can't maintain his self-esteem, as inadequacy and inferiority follow.

The normal pattern of growth involves the acceptance of individual differences and utilizing them competitively and creatively, instead of feelings of inferiority, inadequacy, and shame, some of which is obtained from the parents.

Fierce tensions and emotions in the parents are transmitted to the child. Over-concern by the youngster about his body and its functions lead to a neurosis later in life.

The child may regress and resort to infantile types of behavior (thumb sucking, bed wetting, and eroticism). Indulgence follows if there is no outlet for expression.

There is no normal parent-child relationship. Normally the parents have affection and wise but firm discipline. In the case of chronic illness they usually exert too much affection and too little discipline. In an institution the reverse might be true and, as a result, the child may not feel secure.

By giving him what he wants, the child may listen to wrong radio programs and read the wrong kind of comic books which are exciting and may lead to tension states that he cannot relieve in bed.

Management

1. There must be a positive attitude. The child should be managed but not pushed. The child should not fear the parents. The child should be given hope by seeing himself get well.

2. The whole day should be arranged so that the child earns his privileges (the normal child earns his privileges).

3. Parents' ignorance and their attitude may necessitate long hospitalization so that the youngster will get rid of poor previous habits. Many children are put to bed so as not to miss a diagnosis of rheumatic fever or tuberculosis. Such a child must be rehabilitated. Often he has too many functions and too little motor expression.

Home Management

1. Give the child all he can do inside the limits of his activities.

2. Hands—Furnish as much motor activity as possible.

3. Educational progress—It has been proved that a few hours with a good, intelligent teacher will permit a child to do the work of a full week in school.

4. Normally, the child gains privileges by accepting responsibilities such as getting up on time, keeping his room clean, washing face, and so on. The child should have only the privileges he earns. He

loses temporarily when he stops. One must think of responsibilities for the child in bed and privileges which he can earn.

5. Physicians need mental hygiene education to prevent mental injury to the child. Otherwise the patients are taught to exploit their illness rather than to rise above it (this also applies to nurses and social workers). A physician may, without meaning to, imply that the case is unusual and thus raise further worries in the minds of the parents and the child.

6. Threats may be used when no other way is possible. The parents may have a limited response due to lack of education and intelligence. If the child earns his way, he only needs to wait, but no one of us wants to wait. The child must learn that your way is good.

7. The program for the child's day should make it profitable for him to get things done and everything should stop when he doesn't. (One doesn't need to make a horse drink; if one just has patience enough to wait, he will drink anyway.—C. M. Staff Notes from a paper by BRADFORD MURPHY, M.D., Chief of Child Guidance Service, Denver, Colo.)

Spinal Fluid Removal for Severe Hypertension

In a patient who does not have underlying nephritis, there should be a treatment from the psychologic standpoint of giving the patient adequate rest during this time. Phenobarbital or some other sedative is of value. If the heart is failing, it should have its own treatment. When the patients are doing badly (have increased venous pressure, have encephalopathy developing, as well as cardiac failure and some renal failure) a large percentage of these patients show spinal fluid pressures that are very high, up to 300 or even 700 millimeters of spinal fluid. They may have ocular manifestation during this time, even rapidly failing vision. By repeated spinal fluid removal, of as much spinal fluid as can be taken out, the symptoms of headache, visual disturbance, cardiac failure, even renal failure may be eliminated, or irradiated.—WM. KERR, M.D., in J.A.M.A., Dec. 21, 1946.

Vitamin K and Hemorrhage

A hemorrhagic tendency may be due to a deficiency in prothrombin, one of the essential components of the clotting process. This deficiency is the cause of the hemorrhagic condition associated with obstructive jaundice, with hemorrhagic disease of the newborn, with certain states which interfere with intestinal absorption, such as sprue, and ulcerative colitis, and with extensive liver disease.

Prothrombin cannot be formed by the liver unless vitamin K is present. The administration of vitamin K to the pregnant woman in the form of menadione, in doses of 2 mg. daily, during the last week of pregnancy will prevent hemorrhagic disease of the newborn due to hypoprothrombinemia.

The parenteral administration of vitamin K preparations will eliminate the bleeding tendency associated with obstructive jaundice.

The administration of vitamin K preparations, especially when given by injection, will control the hemorrhagic state due to hypoprothrombinemia in all conditions except that associated with liver disease.—CYRUS C. STURGIS, M.D., in *J.A.M.A.*, Dec. 21, 1946.

Syphilis

A minimum of 2,200,000 units of penicillin are needed to cure an early case. Results are better if the penicillin treatment is combined with 5 doses of mepharsen and 3 doses of bismuth. Penicillin is given in 40,000 unit doses every four hours for seven days. Late syphilis and cases with gumma of skin or bone are treated with two and one-half million units of penicillin. In such cases, recurrences have not occurred—even when the Wasserman reaction has not been altered. In syphilis of the stomach and liver, penicillin is our best treatment, but it appears to be of little use in the treatment of cardiovascular syphilis or tertiary Wasserman fast cases.

Central nervous system patients appear to respond well to penicillin in doses of four million units, repeated every few months for three or four courses.

Causes for Eosinophilia

1. Allergic disorders, including bronchial asthma, hay fever, urticaria and angioneurotic edema.
2. Skin diseases, including pemphigus and dermatitis herpetiformis.
3. Parasitic infestations, especially those in which there is invasion of the tissues, for example, trichinosis, echinococcus disease; less regularly in intestinal parasitism.
4. Certain infections, for example, scarlet fever, chorea, erythema multiforme, and in post-infectious states.
5. Certain diseases of the hemopoietic system; for example, chronic myelogenous leukemia, Hodgkin's disease, pernicious anemia, erythremia and following splenectomy.
6. Following irradiation.
7. Miscellaneous disorders including periarteritis nodosa, tumors involving the ovaries, serosal surfaces, or bone, certain poisons, Loeffler's syndrome.
8. Familial anomaly.
9. Tropical eosinophilia.

Tropical eosinophilia has recently been described by Weingarten as a benign persistent disease seen along the coastal regions of India. (Severe spasmodic bronchitis with paroxysms of coughing, leukocytosis, anorexia, loss of strength, and a high percentage of eosinophiles in the blood smear). The cause is unknown and the previous impression of an allergic state has recently been questioned. Most patients are treated for pulmonary tuberculosis or chronic bronchial asthma. The incidental observation that the condition improves under neoarsphenamine therapy has led to the routine use of this drug. A course of 6 injections ordinarily leads to complete and permanent recovery.—CHARLES D. MARPLE, M.D.

Bacillary Dysentery

Sulfonamide treatment is effective in the acute or chronic bacillary dysentery and for carriers. Sulfanilamide, sulfaguanidine and sulfapyridine are the most effective in destroying shigella organisms. Sulfasuxidine and sulfathaladine are well tolerated and clinically effective. Sulfathiazole and sulfanilylbenzamide are particularly useful against the Sonné type of dysentery. Sulfadiazine is the most efficient clinical agent in combating the Flexner organisms in carriers.—E. C. FAUST, Ph.D., in *J.A.M.A.*, Dec. 21, 1946.

Herpes Simplex

Herpes simplex, the virus of cold sores, may attack the brain and yield encephalitis. Lymphogranuloma venerea may also effect the brain. The diagnosis of virus diseases may be improved by taking two samples from each patient; the first, soon after the onset of the illness, the second, late in convalescence. The specimens should be examined in a virus laboratory for complement fixation and neutralization tests.

In virus diseases, anti-serums should be used. This increases the effect of rabies vaccine and, when used with penicillin, in the treatment of psittacosis, renders it more effective.

Dr. Eaton feels that because the virus organisms grow and multiply only inside of tissue cells, they are little effected by most chemicals and drugs, so that once a disease starts, there is little hope of stopping the progress in the already diseased cells. Some virus diseases can be prevented by immune serum and immune globulin. This is not true of virus pneumonia, but is true in measles.

The sulfonamide drugs and penicillin are useful in psittacosis and lymphogranuloma venerea.

Use of Blood

Whole blood is usually preferable to blood plasma. With the newer preservatives, whole blood may be used safely 21 - 28 days after being drawn. Plasma is preferable to whole blood only in severe burns and in peritonitis. Immune globulin, one of the blood derivatives, should be used for the prevention of some of the childhood diseases, and in infectious hepatitis. Low blood protein may be treated by the use of albumin from the serum.

Treatment of Late Syphilis

Late syphilis may be treated with mapharsen, bismuth subsalicylate in oil, penicillin and possibly potassium iodide. Neoparsphenamine, mercury, arsphenamine and tryparsamide are of historic interest only. The doses of mapharsen and bismuth are varied depending upon the lesion. Latent cases should be treated —BRUCE WEBSTER, M.D., in *New York S.J.M.* Dec. 1, 1946.

Typhus

Para-aminobenzoic acid is relatively specific when administered during the first week following the onset of epidemic typhus, spotted fever, and scrub typhus (tsutsugamushi disease). The drug is given orally in powder form, partly neutralized by sodium bicarbonate to lessen gastric acidity. In order to maintain an average blood plasma level of 30 to 60 mg. per hundred cubic centimeters an initial dose of 8 gm. is followed by doses of 3 gm. every two hours. The results consist of (1) decrease of toxemia in about 24 hours; (2) drop in fever in two days; (3) reduction in complications, such as bronchitis, pneumonia, myocarditis, and hemorrhage; (4) minimal leukopenia and granulocytopenia; (5) shortening of convalescence; (6) elimination of fatalities.—E. C. FAUST, Ph.D., in *J.A.M.A.*, Dec. 21, 1946.

Viral Infections of Respiratory Tract

Secretions expelled as visible droplets by talking, sneezing or coughing are not so important in disseminating viruses as the minute, invisible, exhaled particles which float about in air like tobacco smoke.

Immunity is believed not to last beyond several weeks or months after an attack. Local resistance appears to be largely dependent on an intact mucous membrane with its normal coating of mucus kept in motion by gravity and ciliary and muscular activity.

If virus infections are studied, certain characteristic entities appear. The nasal mucosa infection with profuse discharge (colds); sore throat (pharyngitis, tonsillitis); constitutional symptoms predominate (grip); dry, inflamed membranes with cough (viroid); gastrointestinal symptoms may predominate (viral dysentery).

Pneumonias

Pneumonia occurs in a small percentage of most epidemic diseases of the respiratory tract. Routine chest x-rays indicate many cases of unsuspected pulmonary infection. Formerly the pneumonia was regarded as a different disease or a complication caused by the secondary invasion by pathogenic cocci

of a field prepared by the viral infection. Yet there is ample evidence in diseases such as measles, vaccinia, lymphocytic choriomeningitis and influenza that a primary bacteria-free viral pneumonia occurs.

Treatment

Antipyretics: General opinion now holds that a moderate degree of fever is helpful in overcoming infections, yet acetophenetidin, acetanilid, quinine, aminopyrine and salicylate compounds are widely used as antipyretics.

Cough Remedies and Expectorants: Coughing serves a useful purpose and should not be checked unless it is harassing or exhausting. Cough medicines commonly contain demulcents, expectorants, and supposed antiseptics and serve as unnecessary vehicles for sedatives and other drugs.

Syrup of wild cherry U.S.P., syrup of tolu U.S.P., and elixir of terpin hydrate N.F. are anachronistic vehicles. If codeine or other drugs are to be used, they are better given alone.

Expectorants may be irritating and should not be used during the inflammatory stage or in infections in which exudate is naturally either minimal or profuse. Experiments show that potassium iodide, ammonium chloride or ammonium carbonate and creosote compounds do not change the volume or viscosity of the sputum. They are slightly emetic, tend to increase the flow of saliva, not of exudates, and disturb digestion.

The more fluid the exudate, the greater its penetration to the depths of the lung to which infection may be carried; the more viscid it is, the greater the ease of its expulsion.

Local Therapy. The importance of the coating of mucus and of ciliary activity has been mentioned, yet attempts are often made during infection of the respiratory tract to "treat" all accessible inflamed areas with gargles, irrigations, packs and swabs. These are often composed of irritant antiseptics such as silver-protein compounds, silver nitrate, phenol, iodine, and essential oils.

Gargles cannot reach areas other than the mouth and oropharynx. Medicated irrigations or sprays remove protective mucus; they may spread infection and

if applied with force may cause invasion of the sinuses.

Rational Therapy

Rest: Rest, as for any other infectious process, is the best treatment for acute disease of the respiratory tract, especially if fever is present, in which event confinement to bed is necessary.

Gentle spray of isotonic solution of sodium chloride into the nose is helpful.

The nose should be blown gently and as seldom as possible through both nostrils at once into disposable tissue. Thorough drying and ointment applied to the nares prevents chapping. Lesions of incidental herpes simplex should be sponged frequently with 95 per cent alcohol; ointments should not be used.—HOBART A. REIMANN, M.D. Philadelphia, Pa.

Intestinal Worms (Helminthiasis)

Crystoids (hexylresorcinol) is satisfactory for treating ascariasis and is helpful in removing hookworms. Tetrachlorethylene (U.S.P.) is indicated for hookworm infection. Gentian violet medicinal (U.S.P.) is the drug of choice for strongyloidiasis and for oxyuriasis. For strongyloidiasis, gentian violet tablets are coated with one and one-half hour Seal-Ins and for oxyuriasis are coated with four hour Seal-Ins or Enseals. Oleoresin of aspidium (U.S.P.) fresh, is the first choice and carbon tetrachloride (U.S.P.) is the second choice for treating tapeworm infections.—E. C. FAUST, Ph.D., in *J.A.M.A.*, Dec. 21, 1946.

Peripheral Vascular Sclerosis

This may be treated by sympathectomy. (G. de Takata of Chicago).

Patients who could walk six blocks before developing pain or those who could walk two blocks before developing pain are markedly relieved by sympathectomy, and in some instances can return to a full, normal, duty. Patients who have pain at rest, and those with pain and ulceration with gangrene are markedly operated by the operation, by pain relief, and were made able to walk for a few blocks. If ulceration gangrene had appeared, amputation was usually performed at a lower level.

Common Colds

Common colds are transmitted from the respiratory tract of human carriers. They are usually in a dried form and are inhaled, causing infection to the patient. Dr. H. H. Ryman classifies them as (1) common cold (2) pharyngitis (3) gripe (4) viroid and (5) influenza types a and b.

Usual treatments are without proven value. Treatment recommended includes rest, a full diet, a little alcohol, local treatment of nose and throat (with gentle irrigations) and steam inhalations when the nose and throat are dry. Codeine, 5 to 10 milligrams for a cough with morphine being saved as a last resort. Symptomatic therapy makes the patient comfortable.

Penicillin Wastage

Eighty percent of penicillin now given is wasted because (1) It is used in diseases in which it is known to have no effect; (2) Fever is often the only indication for its use; (3) The dosage is too small, too interrupted, too large, or is given longer than it is needed; (4) Oral therapy requires 2 to 4 times the amount needed for parenteral therapy; (5) It is used as a prophylactic too often in the absence of evidence of its usefulness; (6) The widespread use of penicillin will gradually induce penicillin resistant bacteria, which will cancel its curative effect. This has already occurred among certain hemolytic streptococci and gonococci. The greatest success of penicillin therapy has been attained in the treatment of infections caused by pneumococci, streptococci, staphylococci, gonococci, and meningococci. Parenteral, oral and topical routes of therapy are understood and are preferred. Injection in the spinal canal and inhalation are still experimental.—HOBART M. REIMANN, M.D., in *J.A.M.A.*, Dec. 21, 1946.

Persistence of Positive Tuberculin Test

A long term study has shown that a positive tuberculin test following primary tuberculosis in childhood tends to persist even when the individual is not exposed to tuberculosis in the intervening years.—JANET B. HARDY, M.D. in *Am. J. Pub. Health*, Dec. 1946.

Surgery

The patient must be gotten up early, after an operation; not only having the patient sit beside the bed, but actually getting up on their feet and walking.

All patients over 40 should have a daily examinations of their legs and feet. If soreness or tenderness occurs, over a vein in the leg, or in the plantar area, the femoral veins should be ligated immediately.

Venous thrombosis should be prevented by early ambulation, by Dicumarol, and by femoral vein interruption. Femoral vein ligation seems to have little effect on the venous return to the legs, although such patients should have elastic stockings for a period of several months.

Femoral vein ligation is a life-saving measure in many elderly patients, but must be performed before an embolic phenomenon develops. When venous thrombosis occurs, both femoral veins may be ligated at once as an emergency procedure.

Treatment of Impetigo and Pustular Folliculitis

The treatment of impetigo, acute pustular folliculitis, ecthyma and acute infectious eczematoid dermatitis should include:

1. Thorough general cleaning of the area with soap and water, compresses of normal saline solution or 0.1 per cent potassium permanganate solution for twenty minutes, two to six times daily; gentle mechanical opening of all pustules and careful removal of softened skin debris.

2. Penicillin therapy by injection is indicated, preferably in a dose of 300,000 units of penicillin in oil and beeswax once daily. In simple impetigo, local penicillin therapy may be used for five days. A concentration of 500 units per c.c. or gram may be applied four or five times daily in an aqueous spray or compress in various types of emulsion base or all grease.

3. If local penicillin therapy does not result in improvement within three days, one may use ammoniated mercury, silver nitrate, alibour water or quinolor ointment, in that order.



THUMBNAIL THERAPEUTICS

Trypanosomiasis

Tryparsamide (Merck) or Suramin Sodium (Winthrop) are of greatest value in the treatment of African trypanosomiasis. Stilbamidine and propamidine are curative in cases of early disease and may be helpful substitutes in arsenic fast infections or those with severe optic neuritis. — E. C. FAUST, Ph.D., in *J.A.M.A.*, Dec. 21, 1946.

Streptomycin

Streptomycin is being used in the treatment of typhoid fever, brucellosis, and tularemia. It is very effective in the treatment of tularemia. The drug, however, often results in reactions of fever, nausea, and vomiting. Dose: 2 to 4 grams every 24 hours (the matter of expense also will be a bar to its use in the near future—Editor).

Cholera

The combined administration of blood plasma, to combat shock, and sulfaguanidine is effective in the treatment of cholera. If sulfadiazine and blood plasma are administered at the onset of the disease no deaths will occur.—E. C. FAUST, Ph.D., in *J.A.M.A.*, Dec. 21, 1946.

Angina Pectoris

The treatment of angina pectoris by Dr. O. P. J. Falk of St. Louis includes 2 to 5 grains of papaverine three times daily, sensible living, cutting all smoking out, correction of overweight and other metabolic abnormalities.

Rickettsial Diseases

Rickettsial diseases may be treated with para-aminobenzoic acid.

Typhus

Typhus may be treated by the use of penicillin. Sulfonamides are ineffective.

Pernicious Anemia

Folic acid in doses of 15 to 25 milligrams per day is as effective as liver extract in cases of pernicious anemia. This should be remembered for the patient who cannot take liver extract.

Vaccination for Herpes Simplex

Repeated vaccination with vaccine virus (smallpox) is effective in the treatment of persistent Herpes Simplex. Three insertions are done at each vaccination by means of linear scratches.—J. PERRY, M.B., in *Clinical Proceedings of the Capetown Med. Asso.*, July, 1946.

Oral Penicillin

Oral penicillin should be given on an empty stomach in doses of 100,000 units without food for one hour after. Penicillin given by mouth is only about 1/5 to 1/3 absorbed. There are no serious reactions due to penicillin. The best doses, and timing of administration, is the problem.

Osteomyelitis

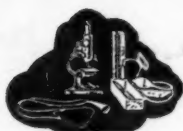
The insertion of a tube through a needle down to the area of infection, and the instillation of 40,000 units of penicillin every three hours through the tube, gave good results in the treatment of osteomyelitis.

Pulmonary Infections

Pulmonary infections respond well to the inhalation of penicillin solutions.

Rheumatic Fever

In rheumatic fever, large doses of salicylates, 8 to 12 gm. daily, should be employed.—HOBART M. REIMANN, M.D., in *J.A.M.A.*, Dec. 21, 1946.



DIAGNOSTIC POINTERS

Ascites

When edema of the leg appears first and is followed by ascites, the probably cause is heart failure. When the cause of the ascites is intra-abdominal (Cirrhosis), ascites develops first and the leg edema later, owing to pressure of fluid on the intra-abdominal veins. In cases of constrictive pericarditis, ascites is often out of proportion to the amount of edema and may appear first.—CONGER WILLIAMS, M.D. in *New Eng. J. Med.*, Apr. 19, 1945.

Mumps

In nearly all cases of mumps, there is some central nervous system involvement and an increased cell count in the spinal fluid (Dr. Rivers of New York). There may be two types of mumps virus; one which is more likely to attack the nervous system than the other.

Early Diagnosis of Anterior Poliomyelitis

The best early clinical sign of impending poliomyelitis in an ailing child, in late summer or early autumn, is inability to bend the neck far forward. If this symptom is absent, no danger to the child is imminent for the next 24 hours.—*J.A.M.A.* Aug. 24, 1946.

Pulmonary Calcifications

Calcifications are being noted frequently in chest x-rays taken on apparently healthy persons. Many such persons have negative tuberculin tests. In such cases, another cause, possibly histoplasmosis, may be active.—JANET B. HARDY, M.D. in *Am. J. Pub. Health*, Dec. 1946.

Precordial Pain and Dyspnea

Precordial pain and dyspnea, with or without cyanosis may be an early symptom of rheumatic fever. Careful questioning may reveal minor degrees of the fever and mild joint pains of rheumatic fever.—D. H. ROSENBERG, M.D. in *New Eng. J. Med.*, Jan. 31, 1946.

Paroxysmal Hypertension

The diagnosis of paroxysmal hypertension due to a tumor of the adrenal medulla (pheochromocytoma) is confirmed by injection of histamine, which will produce an attack of paroxysmal hypertension if a tumor is present.—EDWARD H. RYNEARSON, M.D., in *J.A.M.A.*, Dec. 21, 1946.

Indigestion and Abdominal Aching

We will do well to study the function of the liver in puzzling cases of indigestion and especially those in which there is much soreness and aching in the right, upper quadrant of the abdomen. A history of hepatitis should be asked for.—WALTER C. ALVAREZ, M.D., in *J.A.M.A.*, Dec. 21, 1946.

(One should especially ask concerning jaundice (infectious hepatitis) during a term of military service.—Ed.)

Cancer of the Uterus

This may be diagnosed earlier by the use of the vaginal smear. The same technic may be applied to urine sediment, gastric fluid, and bronchial fluid.

Technic: Aspirate some of the vaginal fluid in a glass capillary tube with a small rubber bulb, spread out the material on glass slides, fix, and stain. The test detects early cases of carcinoma before its lesions can be seen.

NEW BOOKS

Any book reviewed in these columns will be procured for our readers if the order, addressed to **CLINICAL MEDICINE**, Waukegan, Ill., is accompanied by a check for the published price of the book.

The General Practitioner's Bible

An Integrated Practice of Medicine: A Complete General Practice of Medicine from Differential Diagnosis by Presenting Symptoms to Specific Management of the Patient. By Harold T. Hyman, M.D. W. B. Saunders Co., 4 vols. \$50.00 a set.

Truly, this is the general practitioners bible. He can keep it on his desk for constant reference. It is of immediate practical value in diagnosing the cause of symptoms, such as skin lesions on the feet or on the hands, or stiff neck, or abdominal pain and of further value by furnishing detailed, modern methods of treatment.

The author realizes, as many specialists do not, that general practice covers far wider fields than does internal medicine, that it branches into a portion of each specialty, that it includes much minor and some major surgery, and simpler laboratory diagnostic methods.

The tables on differential diagnosis of each symptom, such as dizziness, quickly refresh one's mind as to the various possible etiologic factors which should be investigated in each patient.

The 300 colored illustrations are very life-like and of diagnostic value, as are the 900 black and white.

This monumental work brings to the practitioner the best in medical literature gathered together and made quickly available by indexing and grouping. It is a complete library for the general practitioner.

[The specialist would do well to keep these volumes at hand to instruct him in other fields of medicine and surgery.—Ed.]

Postgraduate Obstetrics

By William F. Mengert, M.D., Professor and Chairman, Department of Obstetrics and Gynecology, Southwestern Medical College, Dallas, Texas. Hoeber, 1947. \$5.00.

The author has grasped, as many have not, that the needs of the practicing physician are different from those of the student. The student needs to know a little of everything, the physician much concerning the common things with which he deals. The author feels that the average physician will deliver approximately 1,800 women and that space should be given in proportion to the frequency with which various complications may be encountered. Conditions occurring less commonly than 1 in 2,000 pregnancies are thus omitted. The text is very readable, revised to date and helpful to the average physician. The author condemns the performance of cesarean sections for several inconsequential reasons. Mention is given of pituitrin stimulation for uterine inertia.

The Nature of Disease Up-to-Date

By J. E. R. McDonagh, F.R.C.S. William Heinmann, London, England, 1946. Price 15s.

The author's unitary theory, protein activity and its relation to disease in soil, plants, animals and man, is presented in a new volume. It is hoped that more physicians, and especially more "authorities", will take the time to interpret his remarks into meaning and into actual relationship with medicine. His conceptions of the universality of disease are enlightening to those who are struggling through the countless, artificial groups of diseases and their causes.

Urologic Roentgenology

By Miley B. Wesson, M.D., San Francisco. Lea & Febiger, 1946. \$5.50.

This small volume presents facts rather than theories, cases rather than generalities and an ample number of illustrations to point out diagnostic and therapeutic maxims. The author's frankness is pleasing and instructive; evidently he is still willing to learn as well as to teach. False observations, such as those produced by overinjection of opaque media, are emphasized.

Growth and Development of the Young Child

By Winifred Rand, A.B., R.N., Mary E. Sweeney, A.M., M.S., E. Lee Vicent, Ph.D. Merrill-Palmer School, Saunders, 1946. \$3.00.

A thoroughly practical, immediately usable handbook covering all phases of growth and development of the growing child. The text is brief, clear and correct. The book is written for nurses, and other students of biology, and for all those interested in the physical and mental development of the healthy child.

A Cross Section Anatomy

By Albert C. Eycleshymer, M.D., Professor of Anatomy, St. Louis University, and Daniel M. Schoemaker, M.D., Associate Professor of Anatomy, St. Louis University. D. Appleton-Century Co., 1938. \$10.00.

One of the most unusual anatomic texts ever published, this volume has been recently reprinted. The anatomy student, the student and practitioner in surgery and the studious internist can gather much from a study of the cross-sections taken at various points across the body and the extremities. Relationships are nowhere better emphasized than by thus showing which structures adjoin each other. The drawings by Tom Jones are clear and bring out the tissues and organs sharply.